

ABSTRACT

Traffic flow management is an ever-growing challenge in airports around the world as the number of travellers is continually increasing. Parking availability, in turn, is one of the most significant challenges that airport officials are trying to address. Most airports have similar needs with regards to traffic and parking; traffic incidents and parking problems cause congestion in the airport access roads. International airports over the years continue to experience increase in traffic flow resulting in travel delays, traffic jams, heavy congestion and insecurity. In 2012, the economic costs of delays at three major New York airports documented by consultants were estimated at almost \$700 million for business travelers and \$1 billion from tourist travelers. The situation is worse in the developing world where there is slow uptake of new technologies for traffic management. An example is Jomo Kenyatta International Airport (JKIA) which experiences serious vehicle traffic management challenges owing to the fact that it is still using traditional manual systems for managing vehicle traffic flow within the airport whereas Julius Nyerere International Airport (JNIA) in the same region has adopted the use of more advanced system to manage its traffic. This study sets out to compare similarities and differences in traffic management between JKIA and JNIA with a view to establishing best practices towards improved traffic management. The main objective of the study was to examine the vehicle traffic flow management at JKIA and JNIA. The specific objectives of the study were to establish the time taken by vehicles into and out of the Jomo Kenyatta and Julius Nyerere airports, to examine the efficiency in the usage of designated vehicle parking spaces at the airports and to examine the security position at the airports. The study adopted a cross sectional study design. The population comprised all people who drive into the airport facility (the assumption is that all people who come to the airport drive or are driven and therefore have knowledge/information on transport related matters). The sample was stratified sampling to obtain the sample size to which a comparative analysis was done. The sample included local travelers, international travelers, taxi drivers, individual visitors, company drivers and export/import drivers. Data was collected using questionnaires, interviews and observation. Descriptive statistics were used to analyze the data. The study established that time taken to get into the airport after arriving at the first security check area was much shorter at JNIA compared to JKIA. At JNIA 67% took less than one minute while at JKIA only 13% took a similar time. The efficiency in the usage of designated vehicle parking spaces was better at JNIA where 95% took less than minute to locate parking at the passenger terminal while at JKIA 19% took a similar time. At JNIA the average efficiency score of parking signage was 63% while at JKIA it was 46%. For JNIA average negative attributes score was 6% while for JKIA it was 39%. The throughput at JNIA is much better than that at JKIA for both the cargo and the main passenger gates and on average travellers would take twice the time to enter and exit the airport at JKIA compared to one at JNIA. Both airports have however not met the accepted international standards. Their uptake of technology is still relatively low compared to other international Airports. The infrastructure at the two airports needs to be improved to allow for multiple options in transportation such as train and underground metros. The results of the study can be used by the decision makers to improve traffic management in their respective airports.